

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,

please do not report the images to the
Image Problem Mailbox.



BEST AVAILABLE COPY

SHEET 1

 OF 5
 APR 25 2002
 TECH CENTER 1600/2900

RECEIVED

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

SWRI-2385-Z

SERIAL NO.

10/056,121

APPLICANT

Wellinghoff et al.

FILING DATE

01/23/2002

GROUP

1623

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AK	AA	RE. 32,073	01/28/1986	Randklev	-	-	
	AB	4,215,033	07/29/1980	Bowen	-	-	
	AC	4,539,048	09/03/1985	Cohen	-	-	
	AD	4,588,756	05/13/1986	Bowen	-	-	
	AE	4,623,738	11/18/1986	Sugerman et al.	-	-	
	AF	4,659,751	04/21/1987	Bowen	-	-	
	AG	4,663,147	05/05/1987	DePrince	-	-	
	AH	4,753,652	06/28/1988	Langer et al.	-	-	
	AI	4,964,911	10/23/1990	Ibsen et al.	-	-	
	AJ	4,978,640	12/18/1990	Kelly	-	-	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBL. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
AK	AK	2,181,507	01/19/1997	Canada	-	-		
AK	AL	EP 0159887 A2	30.10.85	EPO	-	-		
AK	AM	EP 1142863 A2	no date	EPO			X	

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages of Publication, Etc.)

AK	AN	"Nanostructured Materials: A Technical-Market Analysis", Mincy N. Ritter, Business Communication Co., Inc., Fine, Ultrafine and Nano Powders '98'						
AK	AO	H. Schmidt et al., "Organically modified ceramics and their applications", Journal of Non-Crystalline Solids, 1990, 121, pp. 428-435						
AK	AP	Mark W. Ellsworth et al., "Mutually Interpenetrating Inorganic-Organic Networks. New Routes into Nonshrinking Sol-Gel Composite Materials", J. Am Chem. Soc., 1991, 113, 2756-2758						

EXAMINER

DATE CONSIDERED

*EXAMINER:

Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line though citation if not in conformance and not considered. Include copy of this form with next comment to applicant.

APR 25 2002

APR 24 2002

TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

SWRI-2385-Z

SERIAL NO.

10/056,121

APPLICANT

Wellinghoff et al.

FILING DATE

01/23/2002

GROUP

1623

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[initials]</i>	BA	5,030,608	07/09/1991	Schubert et al.	—	—	
<i>[initials]</i>	BB	5,057,018	10/16/1991	Bowen	—	—	
<i>[initials]</i>	BC	5,064,877	11/12/1991	Nass et al.	—	—	
<i>[initials]</i>	BD	5,276,068	01/04/1994	Waknine	—	—	
<i>[initials]</i>	BE	5,308,886	05/03/1994	Masuhara et al.	—	—	
<i>[initials]</i>	BF	5,328,947	07/12/1994	Taguchi et al.	—	—	
<i>[initials]</i>	BG	5,334,625	08/02/1994	Ibsen et al.	—	—	
<i>[initials]</i>	BH	5,372,796	12/13/1994	Wellinghoff	—	—	
<i>[initials]</i>	BI	5,401,528	03/28/1995	Schmidt	—	—	
<i>[initials]</i>	BJ	5,472,797	12/05/1995	Yajima et al.	—	—	
<i>[initials]</i>	BK	5,486,548	01/23/1996	Podszun et al.	—	—	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBL. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
<i>[initials]</i>	BL	EP 0754 675 A2		EPO				
<i>[initials]</i>	BM	JP H 5-178794	12/26/91	Japan	—	—	Best	
<i>[initials]</i>	BN	WO 92/16183	24.04.97	PCT	—	—	Yes	

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages of Publication, Etc.)

<i>[initials]</i>	BO	Stephen Wellinghoff et al., "Tantalum oxide-polymer composites", The International Symposium on Advances in So.-Gel Process and Applications, Edited by Y.A. Attia, Plenum Press, pp 141-154, 1994.
<i>[initials]</i>	BP	Christine Landry et al., "In situ polymerization of tetraethoxysilane in poly(methyl methacrylate): morphology and dynamic mechanical properties", POLYMER, 1992, Vol. 33, No. 7, pp. 1486-1495
<i>[initials]</i>	BQ	Michael J.S. Dewar et al., "Factors Influencing the Stabilities of Nematic Liquid Crystals", Journal of American Chemical Society, 97:23, 6658-6666

EXAMINER

[Signature]

DATE CONSIDERED

[Signature]

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next comment to applicant



INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.
SWRI-2385-ZSERIAL NO.
10/056,121APPLICANT
Wellinghoff et al.FILING DATE
01/23/2002GROUP
1623

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>JK</i>	CA	5,502,087	03/26/1996	Tateosian et al.	/	/	
<i>I</i>	CB	5,556,931	09/17/1996	Imura et al.	/	/	
<i>I</i>	CC	5,663,214	09/02/1997	Okada	/	/	
<i>JK</i>	CD	5,670,583	09/23/1997	Wellinghoff	/	/	
<i>I</i>	CE	5,695,681	12/09/1997	Siemensmeyer et al.	/	/	
<i>I</i>	CF	5,720,805	02/24/1998	Wellinghoff et al.	/	/	
<i>JK</i>	CG	5,730,601	03/24/1998	Bowman et al.	/	/	
<i>I</i>	CH	5,804,097	09/08/1998	Delavier et al.	/	/	
<i>I</i>	CI	5,833,880	11/10/1998	Siemensmeyer et al.	/	/	
<i>JK</i>	CJ	5,834,532	11/10/1998	Yamamoto et al.	/	/	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBL. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
<i>JK</i>	CK	WO 97/14674	24.04.97	PCT	/	/		
<i>JK</i>	CL	WO 98/23580	04.06.98	PCT	/	/		
<i>JK</i>	CM	WO 99/17716	15.04.99	PCT	/	/		

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages of Publication, Etc.)

<i>JK</i>	CN	Wolfgang Wedler et al., "Vitrification in Low-molecular-weight mesogenic Compounds", J. Mater. Chem., 1991, 1(3), 347-356
<i>JK</i>	CO	Sukmin Lee et al., "Phase Behavior of Liquid Crystalline Polymer/Model Compound Mixtures: Theory and Equipment", Macromolecules, Vol. 27, No 14, 1994, 3955-3962
<i>JK</i>	CP	R.A.M. Hikmet et al., "Effect of the Orientation of the Ester Bonds on the Properties of Three Isomeric Liquid Crystal Diacrylates Before and After Polymerization", Macromolecules, Vol. 28, No. 9, 1995, 3313-3327

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next comment to applicant

APR 24 2002

TECH CENTER 1500/2900

APR 25 2002

RECEIVED

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

SWRI-2385-Z

SERIAL NO.

10/056,121

APPLICANT

Wellinghoff et al.

FILING DATE

01/23/2002

GROUP

1623

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
W	DA	5,852,248	12/22/1998	Chadwick	/	/	
I	DB	5,859,089	01/12/1999	Qian	/	/	
	DC	5,865,623	02/02/1999	Suh	/	/	
W	DD	5,886,064	03/23/1999	Rheinberger et al.	/	/	
I	DE	5,897,885	04/27/1999	Petticrew	/	/	
I	DF	5,910,273	06/08/1999	Thiel et al.	/	/	
W	DG	5,991,991	06/15/1999	Keller et al.	/	/	
I	DH	5,995,514	09/21/1999	Huang et al.	/	/	
	DI	5,998,499	12/07/1999	Klee et al.	/	/	
W	DJ	6,220,404	02/08/2000	Ettlinger et al.	/	/	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBL. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
W	DK	WO 98/13008	02/04/98	PCT	/	/		
W	DL	WO 94/24052	27.10.94	PCT	/	/		
	DM							

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages of Publication, Etc.)

W	DN	Y. Wei et al., "Synthesis of New Organic-Inorganic Hybrid Glasses"; Chem. Mater. 2(4), 337 (1990)
W	DO	Manabu Node et al. "Hard Acid and Soft Nucleophile System. 2." Demethylation of Methyl Ethers of Alcohol and Phenol with an Aluminum Halide-Thiol System", J. Org. Chem. 1980, 45, 4275-4277 (1980 American Chemical Society)
W	DP	Glancarto Galli et al., "Thermotropic poly(ester- β -sulfide)s", Polymer Bulletin 21, 563-569 (1989)

EXAMINER

DATE CONSIDERED

*EXAMINER:

Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next comment to applicant



BEST AVAILABLE

SHEET 5

OF 5

RECEIVED

APR 25 2002

TECH CENTER 1600/2900

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

SWRI-2385-Z

SERIAL NO.

10/056,121

APPLICANT

Wellinghoff et al.

FILING DATE

01/23/2002

GROUP

1623

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AK	EA	6,027,816	02/22/2000	Ono et al.	/	/	
I	EB	6,031,015	02/29/2000	Ritter et al.	/	/	
I	EC	6,087,816	07/11/2000	Volk	/	/	
MT	ED	6,335,462	01/01/2002	Etzbach et al.	/	/	
	EE						
	EF						
	EG						
	EH						
	EI						
	EJ						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBL. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	EK							
	EL							
	EM							

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages of Publication, Etc.)

	EN	"Titanium Tin Oxide Nanoparticles for Sunscreen Applications"	no date
	EO		
	EP		

EXAMINER

Kilb

DATE CONSIDERED

07/02

*EXAMINER:

Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next comment to applicant

TECH CENTER 1600/2900

PTO/SB/08B (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitution for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
Application Number				10/056,121	
Filing Date				01/23/2002	
First Named Inventor				WELLINGHOFF, et al.	
Group Art Unit				1623	
Examiner Name					
Attorney Docket Number				SWRI-2835-04	

[illegible]

Examiner Signature	<i>G. L. H.</i>	Date Considered	07/03
-----------------------	-----------------	--------------------	-------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

+

OCT 31 2002

Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449A/PTO

(use as many sheets as necessary)

Sheet

1

of

1

Complete if Known

Application Number

10/058.121

Filing Date

01/23/2002

First Named Inventor

Wellinghoff et al.

Group Art Unit

1623

Examiner Name

Not Yet Assigned

Attorney Docket Number

SWRI-2835-04

[illegible][illegible]

Examiner
Signature

Date
Considered

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that Issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.


**SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT**
(Use several sheets if necessary)

 ATTY. DOCKET NO.
SWRI-2835(Z)-04

 SERIAL NO.
10/056,121

APPLICANT

Wellinghoff et al.

 FILING DATE
01/23/2002

 GROUP
1711

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[Signature]</i>	AA	5,622,648	04/22/1997	Parri et al.			
<i>[Signature]</i>	AB	6,031,015	02/29/2000	Ritter, et al.			
<i>[Signature]</i>	AC	6,258,974	07/10/2001	Wellinghoff et al.			
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBL. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AK							
	AL							
	AM							

OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages of Publication, Etc.)

	AN	
	AO	
	AP	

EXAMINER

Killer

DATE CONSIDERED

07/03

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next comment to applicant

RECEIVED

AUG 06 2002

TECH CENTER 1600/2900

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Complete if Known	
Application Number			10/056.121	
Filing Date			01/23/2002	
First Named Inventor			WELLINGHOFF, et al.	
Art Unit			1623	
Examiner Name			Not Yet Assigned	
Attorney Docket Number			SWRI-2835-04	

RECEIVED
JUN 17 2001

JUN 17 2003

2003
INTER 1600/2900

[illegible][illegible]

Examiner Signature	<i>Killer</i>	Date Considered	<i>07/03</i>
-----------------------	---------------	--------------------	--------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

conformance and not considered. Include copy of the form with most communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**